

REMARKS

Support for the amendment to claim 1 may be found at page 4/lines 29-30 and page 33, lines 9-20 and 28/18 of the specification. The ability of the voided layer to provide a high level of light transmission and a high level of diffuse light transmission efficiency is the result of selecting the void loading and size and the thickness of the void layer. This is now reflected in the claims.

Claims 1-4, 6-7, 11-14, and 19-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk et al. (U.S. Patent No. 5,825,543, hereinafter "Ouderkirk"). According to paragraph 4 of the Examiner's rejection:

As to claim 1, Ouderkirk discloses **a light diffuser** (col. 15, line 40) comprising a thermoplastic layer (col. 32, lines 62-63) containing thermoplastic polymeric material and microvoids (col. 16, lines 51-55) and having **a diffuse light transmission efficiency of at east 65%** (col. 32, lines 39-41, 50-53) and **a light transmission greater than 80%** (col. 29, lines 8-9).

However, the reference fails to specifically disclose a microvoids having substantially circular cross-section in a plane perpendicular to the direction of light travel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have microvoids having substantially circular cross-section in a plane perpendicular to the direction of light travel in the light diffuser device since **one would be motivated to set the parameters and average dimensions of the voids by careful manipulation and stretch ratios through the use of selective compatibilizers to optimize the optical properties of the diffuser (col. 16, lines 52-62).**

Applicants are concerned that the Examiner, as in prior rejections, is confusing the distinctions in the terms employed in the present application with those in the Ouderkirk reference. An attempt was made to help resolve this misapplication of terms when Applicants submitted a Declaration Under Rule 132 by inventor Cheryl Brickey on July 1, 2005. It is requested that the Examiner review the explanations in that Declaration relative to the following analysis in order to see how the terms in Ouderkirk do not apply to the claim limitations of the present invention.

Before reviewing the term distinctions in detail, it is useful to contrast the invention and objectives of the "Reflective Polarizing Element" of Ouderkirk with the present invention. The present invention is directed to a

transmissive light diffuser designed to provide highly diffused light to the polarizer of a liquid crystal display. The diffuser must both provide a high “light transmission” percentage and must also provide a high value of “diffuse light transmission efficiency”. As laid out at pages 1-3 of the Declaration of Ms Brickey, the light transmission is the percent of light out put by the diffuser divided by the light input. The “diffuse light transmission efficiency” serves as a measure of the extent to which specular light is converted to diffuse light and is calculated using a specular input and then dividing the light output that has been deflected to outside 2° from the incident angle by the total output light. In summary, the diffuser must transmit a very high proportion of the total incident light and must also be efficient at diffusing the incident specular light into diffuse light.

While the diffuser of the invention is designed to be used between the backlight and the polarizer of an LC display to diffusely transmit the light, the Ouderkirk element is a polarizer. Its function is to pass only light polarized along one orthogonal axis and block light polarized along the other orthogonal axis. While conventional polarizers absorb the unwanted polarized light, Ouderkirk has invented a reflective polarizer that diffusely reflects the unwanted polarization with the goal of recovering some of that light when it is reflected back to the polarizer. In the diffuser of the present invention, there is no concern about polarized light and the diffuser does not care about the polarization.

Turning to the first bolded passage of the Examiner’s rejection “**a light diffuser**”: the present invention is a high light transmission diffuser whereas the Ouderkirk device may be described as a polarizer with reflective diffuser for unwanted polarized light. The actual language at col. 15/line 40 refers to “diffuse and disperse reflection” not to diffuse transmission. The amended claim emphasizes the transmissive aspect of the diffuser as dictated by the transmissivity requirements of the claim.

A “**diffuse light transmission efficiency of at east 65%**” is not found at col. 32, lines 39-41, 50-53 of Ouderkirk. The referred to passages are claims dependent on claim 13. Claim 13 refers to an optical body having >50% reflectivity for a first polarization state and a transmission greater than 50% for a second orthogonal polarization state. In other words, the body preferentially passes the second state over the first. Since each polarization state constitutes one

half the total, and at least 50% of the first state is reflected, it follows that not more than 75% of total light can be transmitted. This does not satisfy the 80% requirement of the claim.

Claim 17 at Lines 39-41 of col. 32 only refers to a transmission of 70% for one of the two states of polarization. This is a statement about total light transmission of one polarization state and says nothing about whether the light is diffuse or specular. Since dependent on claim 13 and in turn on 1, this statement means that one of the two polarization states has 70% transmission of total light and the other reflects at least 50% leading to a total transmission in the range of 60-75%. At col. 32/lines 50-52, Claim 20 refers to the same language as Claim 17 but simply refers to a non-diffuse (different definition - within 8°) transmission of at least 70% which corresponds only to at least 35% of the total transmission of both polarization states. None of the cited materials gives a clue to the percent of the total output light that is diffuse which is what the term “diffuse light transmission efficiency” is all about.

As to a **light transmission greater than 80%**, col. 29, lines 8-9 are referring to the separate transmissions of the two states of polarization. In term of total transmission, they would be $(87.1 + 39.7)/2 = 63.4\%$. This should not be surprising since the express intention of Ouderkirk is to reflect at least 50% of the unwanted state of polarized light. The 87.1% figure only pertains to one state of polarization, not the total of light out divided by light in.

Regarding one would be motivated to set the parameters and average dimensions of the voids by careful manipulation and stretch ratios through the use of selective compatibilizers to optimize the optical properties of the diffuser (col. 16, lines 52-62), it is submitted that the relied upon passage is vague and indefinite and is not enabling with respect to a transmissive diffuser nor any parameters to be adjusted to achieve any particular effect. To the extent the reference is about diffusion, it is about reflective diffusers not transmissive diffusers. The teachings do not provide any facts or evidence to motivate one of ordinary skill in the art to select any particular parameters to accomplish any particular result; they cannot be viewed as foreclosing any subsequent patentable selections as the Examiner would appear to suggest.

The Examiner concludes his rejection by noting “Applicant’s arguments with respect to claims 1-9 and 11-22 have been considered but are

moot in view of the new ground(s) of rejection.” It is noted that the Examiner has relied upon exactly the same passages of the same Ouderkirk reference as in the prior Office Action as the basis for rejection. If the Examiner had respond to the evidence and arguments proffered by Applicants, as Applicants believe he should have, it is believed that the Examiner would have been forced to recognize the error in his position. If the Examiner decides to again reject this application, Applicants hereby request that a definitive response be provided to each of the above arguments and the rejection be non-final so that Applicants have the opportunity for rebuttal that they are guaranteed by the Rules and MPEP.

In view of the foregoing amendments and arguments, the Examiner is respectfully requested to withdraw the outstanding rejection and to pass the subject application to Allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'A. Kluegel', written over a horizontal line.

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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.